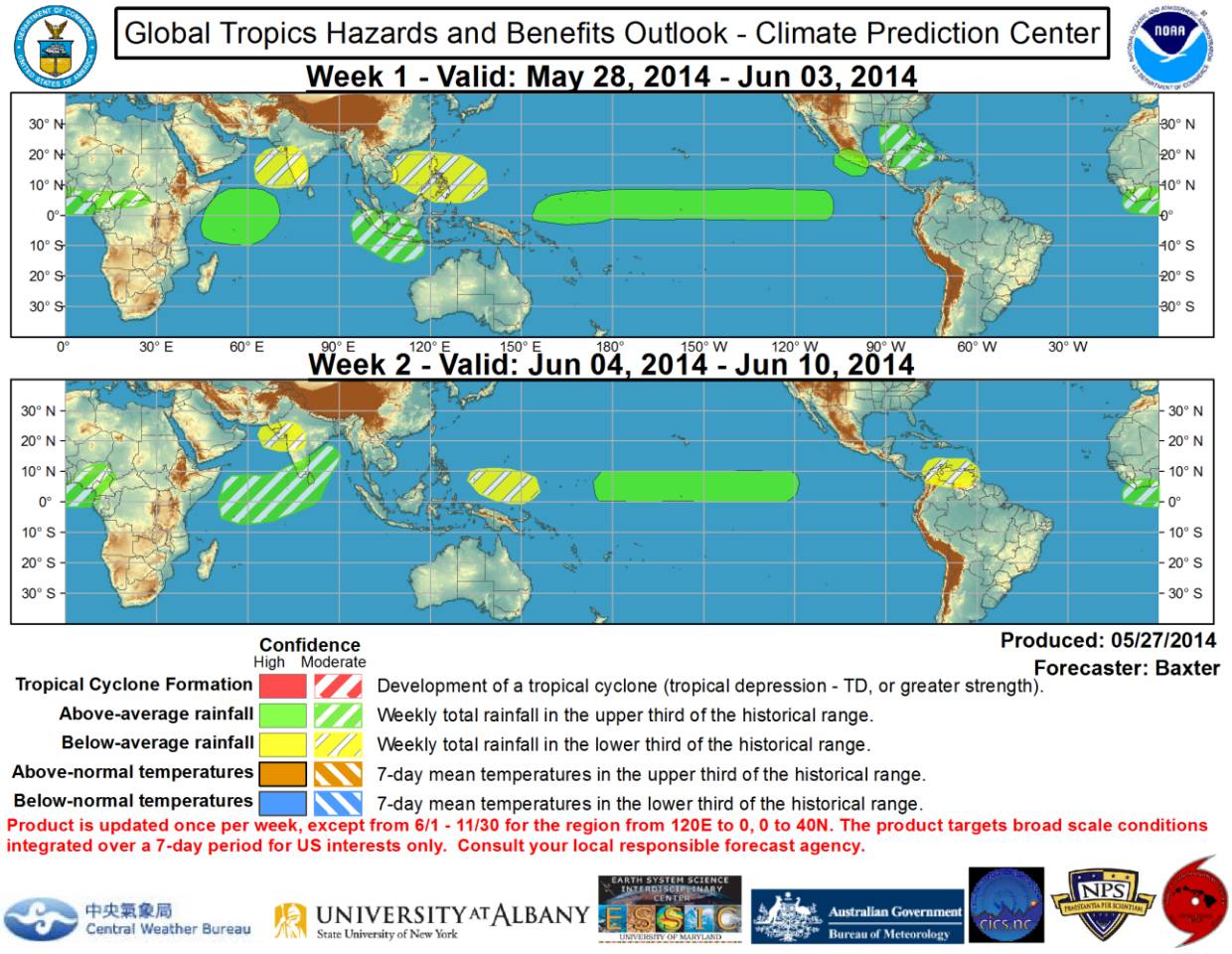

The MJO remained weak during the past week, but has shown some signs of reorganization in recent days. Kelvin wave activity has enhanced convection across parts of Africa and the western Indian Ocean, which may lead to a new MJO enhanced phase propagating across the Indian Ocean during the next one to two weeks. The RMM index suggests a weak MJO in phase 1, and the CPC velocity potential index suggests the enhanced phase is over Africa. Compared to last week, these indices are in much better agreement, and so confidence in placing the current nascent enhanced phase of the MJO between 20E and 50E is fairly high.

Dynamical MJO forecasts are not in good agreement on the upcoming MJO evolution, reigning in forecast confidence during the next couple of weeks. The GFS ensemble indicates a nearly stationary signal over the western Indian Ocean, while the UKMET ensemble suggests rapid propagation of the signal into the western Pacific by the end of Week-2, more consistent with the phase speed of a Kelvin wave. The ECMWF forecast is closest to canonical MJO propagation over the next two weeks.

The outlooks for Week-1 and Week-2 are based largely on dynamical model consensus, supplemented by MJO composites in phases 2 and 3. Additionally, the low-frequency state is accounted for, with the outlook reflecting the tendency toward El Niño conditions across the tropical Pacific.

During Week-1, convection related to a Kelvin wave and the emerging MJO signal is forecast across the western Indian Ocean. Below-average rainfall is favored across parts of the Philippines and South China Sea, consistent with any emerging MJO and supported by model guidance. Enhanced rainfall across parts of the southwestern Maritime Continent is indicated by the dynamical models and consistent with a Kelvin wave propagating across the Indian Ocean ahead of the potential MJO signal. Below-average rainfall is also indicated across western parts of the Indian subcontinent as well as the Arabian Sea, where the monsoon has not yet begun. An area of disturbed weather is forecast across parts of Central America, the western Caribbean, and the Gulf of Mexico. Some ensemble members suggest tropical cyclogenesis is possible in this region by the end of Week-1 or early in Week-2, though given model trends and climatology, this risk is decidedly low. With that said, enhanced rainfall is expected to impact parts of the U.S. Gulf Coast by later in Week-1.

For Week-2, the low-frequency state is highlighted across the Pacific, with other shapes depicted based on model consensus and the expected evolution of a weak, but coherent, MJO event. In that light, the outlook map for Week-2 depicts notable eastward propagation of signals across the Indian Ocean and Maritime Continent, though at moderate confidence due to the fairly high uncertainty.

Major hurricane Amanda formed in the eastern North Pacific during the past week, and is forecast to dissipate over the next several days, safely away from land. The expected evolution of the MJO into early June tends to favor tropical cyclone activity in the Arabian Sea; however there is no model support for a TC and confidence is too low to be highlighted on the map. Across the eastern North Pacific, the base state tends to support enhanced odds of tropical cyclogenesis; however, the expected MJO state supports reduced chances of TC formation.